

From: Simonetti, Ray [rsimonet@panynj.gov]

Sent: Tue 7/20/2004 8:23 AM

To: 'Shyam Sunder'; Reiss, Alan; Bhol, Saroj

Cc: Begley, James; Fadavi, Ali; Lin, C. John; Lombardi, Frank; james.lawson@nist.gov; wgrosshandler@nist.gov; cauffman@nist.gov; cheri.sawyer@nist.gov; john.elchner@nist.gov

Subject: RE: Re: Fwd: FW: NIST Report- Appendix P

Attachments: Answers to NIST 061904.doc (28 KB)

Dr. Sunder,
Attached is a word document addressing your questions.

Soroj,
Please setup a meeting/conference call.
Thanks

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Answers t...

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Shyam,
I copied the following NIST questions (**in bold**):

NIST has no additional information concerning the activation of the repeater, at this time. NIST is still in the process of analyzing the data on the repeater system's operation and no final conclusions have been drawn, at this time.

Would like to discuss the two items mentioned below. The first item to discuss is the design of the WTC FDNY radio antenna system. Second item to discuss was the setup of the Vega Console for operating the WTC FDNY radio system:

- ☐ Damage to the repeater antenna system
- ☐ Failure of the radio hand set located at the Fire Command Desk in the lobby of WTC 1.
Two failure modes are being considered, (1) the radio handset was broken, and (2) the volume on the handset was turned down.

The channel designations NIST used in Appendix P are the titles provided to NIST by the Port Authority for each of the communications records. See the list at the end of the Appendix. NIST would appreciate the Port Authority providing more accurate titles for the channels and information on the use of each channel.

The titles of the CD's that were supplied identified the police desks where the tape was recorded. For example the CD labeled "WTC Police Desk" contain recordings made at the World Trade Center Police Desk.

To summarize what Alan wrote concerning the WTC radio channels:

- ☐ Ch. 25 WTC radio Ch. B was the WTC maintenance channel – used by ABM maintenance personnel; contract staff (structural, mechanical, electrical) Port Authority supervisory maintenance staff and Port Authority locksmith staff.
- ☐ Ch. 26 WTC radio Ch. W was the WTC police channel - used by Port Authority WTC police. Civilian staff at WTC would only use this channel in extreme emergencies.
- ☐ Ch. 27 WTC radio Ch. X was the WTC security channel – used by Summit contract security staff and Port Authority security supervisory staff.
- ☐ Ch. 28 WTC radio Ch. Y was the WTC operations channel – used by ABM cleaner contractor staff and Port Authority operations supervisory staff.
- ☐ Ch. 29 WTC radio Ch. Z was the WTC elevator channel – used by ACE elevator contract staff, Port Authority elevator supervisory staff, Port Authority Office Space staff and Port Authority Property management staff.

World Trade Center radio desk communications at the World Trade Center:

- ☐ Police desk radio communications were primarily to WTC police officers over channel "W". The police desk also put out radio transmissions on all channels concerning possible fires, bombs, etc. Preceding the all channel transmission there were three beep tones. Upon completion of the "all channel" transmission the police desk returned their radio console for communications with the police only on channel "W".
- ☐ Operations Control Center (OCC) radio communications were with all civilian staff (contractor and Port Authority) on channels B, X, Y and Z. The OCC also transmitted on all channels (except channel "W") concerning possible fires, bombs, etc. Preceding the all channel transmission there were three beep tones.
- ☐ Security Control Center (SCC) radio communications were with security staff (contractor and port Authority) on channel "X". The SCC radio console was capable with communications on channels B, X, Y and Z.

In addition, did the repeater recording device actually record the communications from both the repeater's input frequency and the repeaters output frequency or did it record just the input frequency or just the output frequency? If it was one or the other, input or output, which frequency was it the input or the output frequency?

Answer - The recorder was connected via hard wire to the base/repeater station wire line in/out terminals. Also connected to the line in/out terminals were the Vega consoles at the towers fire command stations and a Motorola Centracom II console located at the WTC Police desk. Therefore the audio recordings were from audio coming over the hard wire from the fire command stations Vega consoles and the demodulated receive audio output from the base/repeater station. Base/repeater station Line audio "in" to the base/repeater station was audio coming from the Vega consoles (voice and tones) over hard wire. Base/repeater station Line audio "out" is the demodulated audio generated from the base/repeater station RF receiver. An on channel modulated RF input signal to the base/repeater station receiver would produce a demodulated audio output on the station line "out" terminal. This receive audio was sent over hard wire to the recorder, Vega consoles and the Centracom II console.

If there are other issues that Ray Simonetti would like to discuss related to the communications I would be pleased to be a part of a conference call where we could have further discussions.

I think a conference call would help in explaining what is written above. I also recommend a meeting to go over the tone analysis. At the meeting we will listen to the recording while reviewing the tone analysis. I had a meeting like this with the 911 Commission and I believe it cleared up alot of their questions concerning the use of the Vega console and its effect on the FDNY repeater.